Bump and Roll

Summary

"Bump and Roll" is an interactive exhibit that demonstrates nanomaterial properties using an everyday object: a leaf of cabbage. The nanoscale structures on a cabbage leaf cause water to bead up and slide off its surface. Scientists are replicating these "superhydrophobic" properties with nanotechnology. Drip water onto a cabbage leaf, and change the angle of the surface to see how the droplets behave. Find out about the super-small bumps that make this surprising behavior possible.

Cabbage leaves must be replaced every few days, and Bump and Roll's water tank must be refilled occasionally.

Big Idea

- Nanoscience is harnessing nanoscale phenomena seen in nature to create new techniques, materials, and products.

Learning Goals

- Tiny micro and nanoscale bumps can make surfaces water-repellent and self-cleaning.
- It's fun to play with water on a superhydrophobic surface, but there are lots of practical applications of the technology.

Exhibit Details

Audience: All ages

Exhibit Format: Stand-Alone Exhibit Component

Exhibit Dimensions: 65 ½"w x 32 ½"d x 78"h